Scan DSA 11

Congratulations on your new Scan insert

You have purchased a product by one of Europe's leading manufacturer's of wood-burning stoves, and we are sure that you will have years of pleasure with your purchase. To make the best possible use of your stove, it is important that you follow our advice and instructions.

Please read this Assembly- and instructions manual before you start to assemble your stove.

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Installation

The house owner is responsible for ensuring that all necessary national and local safety measures are observed during installation and fitting and also responsible for observing the fitting and operating instructions detailed in this manual.

When you install any kind of fireplace or stove, you must inform the local authorities. You are also responsible for calling in a chimney sweep to inspect and authorize the installation.

To ensure best-possible functionality and safety for your installation, we advise you to call a professional fitter. Our Scan Dealer will be able to recommend a qualified fitter in your area. For information on Scan Dealers, please go to www.scan.dk.

Technical data and dimensions

Test in compliance with EN 13229

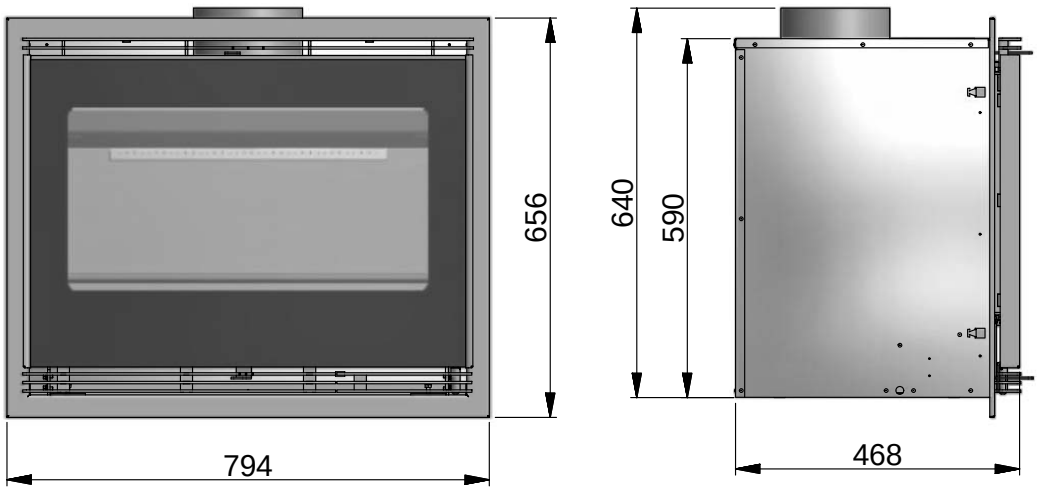
CO Emission at 13% O_2:	0,16%	1654 mg/Nm3
Dust @ 13% O_2:		66 mg/Nm3
Efficiency:		70%
Rated heat load:		10 kW
Chimney temperature:		371 °C
Flue outlet flow:		10,1 g/sek
Vacuum EN 13229:		12 Pa
Recommended vacuum in flue connection piece:		16-20 Pa
Combustion air requirement:		22,8 Nm3/h
Fuel:		Wood
Fuel consumption:		3 Kg/h
Amount of fuel:		2,5 kg
Weight:		100 kg
Flue connection piece internal diameter:		175 mm
Flue connection piece external diameter:		179 mm
Approval type:		Intermittent fuelling

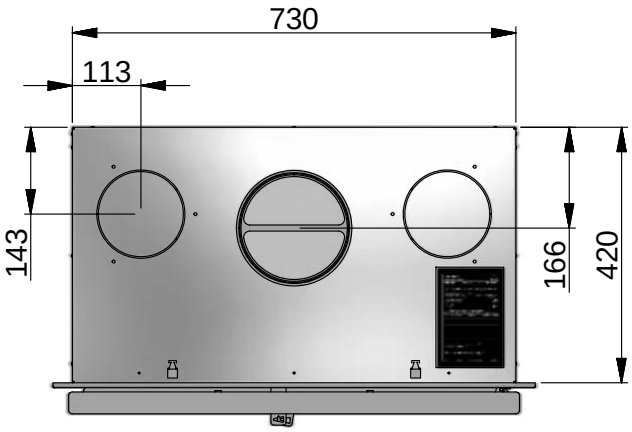
Intermittent fuelling means normal use of a woodstove. In other words, you should let the fire die down until only the embers are left, before refuelling.

The Scan DSA 11 was build in compliance with the homologized product type specified in the Assembly- and Instructions Manual provided with the product.

The EC declaration of conformity is available from www.scan.dk

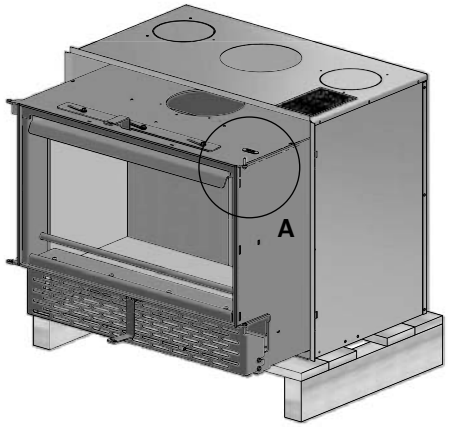
Dimensioned drawing for Scan DSA 11





Product registration number

Take the insert out of the cassette and read the product registration number and make a note of it below. This number must be kept safe in case you need to contact us.



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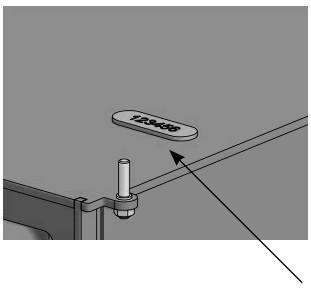


Product registration number

Write the insert's product registration number here:

Additional accessories

- Fan
- Convection connection pieces Ø149 mm

Type plate

All Scan wood-burning stoves are fitted with a type plate, that specifies the approval standards and the distance to flammable materials.

Scan DSA 11
Insert fired by solid fuel

CE

Standard: EN 13229 EC no. 90084600

Minimum distance to heat insulation:
Side: 50 mm - Back: 50 mm - Top: 300 mm - Bottom: 100 mm
Minimum insulation: see assembly- and instructions manual
Side, Back, Top, Bottom: 50/100

CO emission at 13% O2:	0,16%	1654 mg/Nm³
Dust CO emission at 13% O2:		66 mg/Nm³
Flue gas temperature:		371°C
Nominal heat output:		10 kW
Efficiency:		70%
Fuel type:		Wood
Operation type:		Intermittent

The appliance can be operated in a shared flue.

Country	Classification	Certificate/Standard	Approved by
EUR	Intermittent	EN 13229	Teknologisk Institut

Follow assembly- and instructions manual.
Use only recommended fuels.

Montage- und Bedienungsanleitung beachten.
Verwenden Sie nur empfohlene Brennstoffe.

1000 Scan A/S DK 5492 Vissenbjerg 09-2009

Loose parts

In the insert's combustion chamber you will find the following loose parts:

- Service kit
- Flue connection piece
- Gasket for flue connection piece
- Bag containing loose parts:
- 6 x clips
- 4 x rawl plugs
- 4 x Torx screws M6X50
- 4 x washers Ø8 / Ø16x1.5
- 5 x Allen screws M6x10
- Torx key

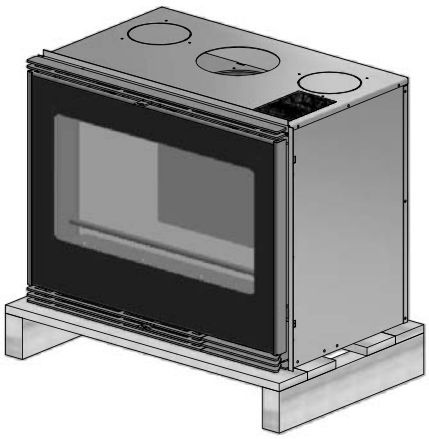
Service kit

The service kit contains the following:

- Fitting for flue connection piece (not used on Scan DSA 11)
- Gasket (not used on Scan DSA 11)
- Safety fitting (not used on Scan DSA 11)
- Plastic plugs for transport safety hole at the bottom of the stove (not used on Scan DSA 11)
- Various tools
- Glove
- Fire starters for first lighting

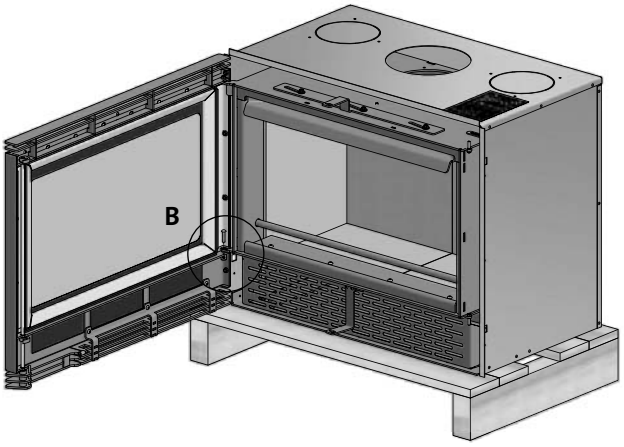
Removing the packaging

Scan DSA 11 is delivered secured to a pallet. To remove the packaging, please see below:



To remove the door:

Loosen the Pointed screw, remove the rivet and lift the door off.



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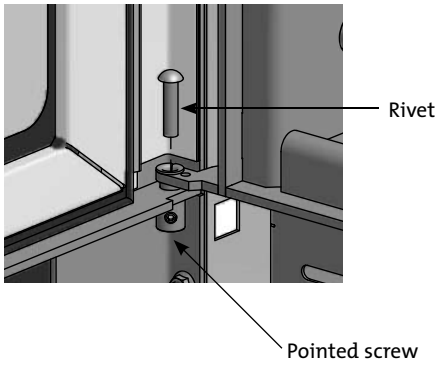
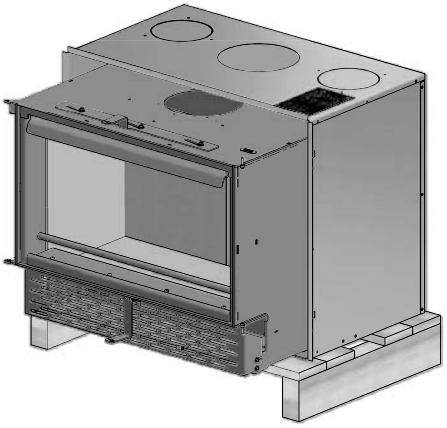
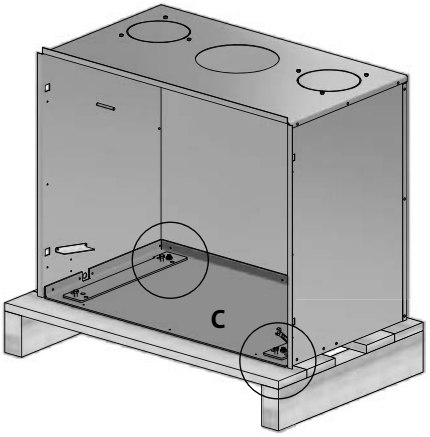


Pull the insert out of the cassette.



Remove the two screws securing the cassette to the pallet.



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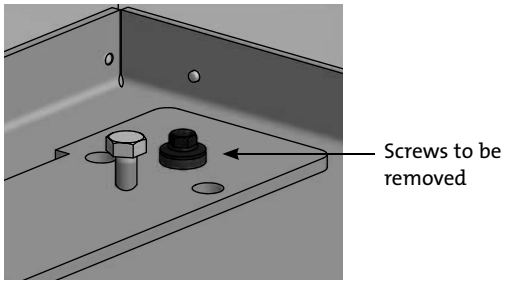
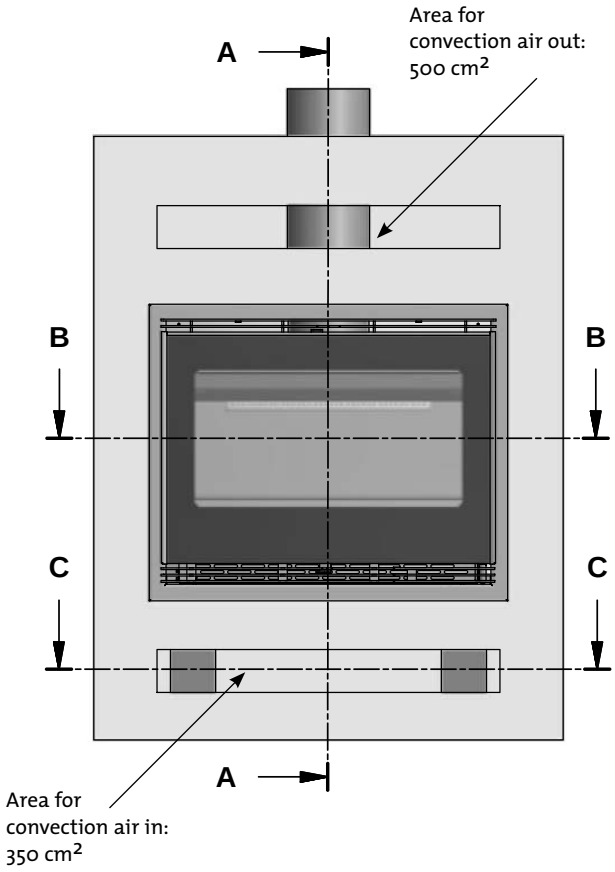
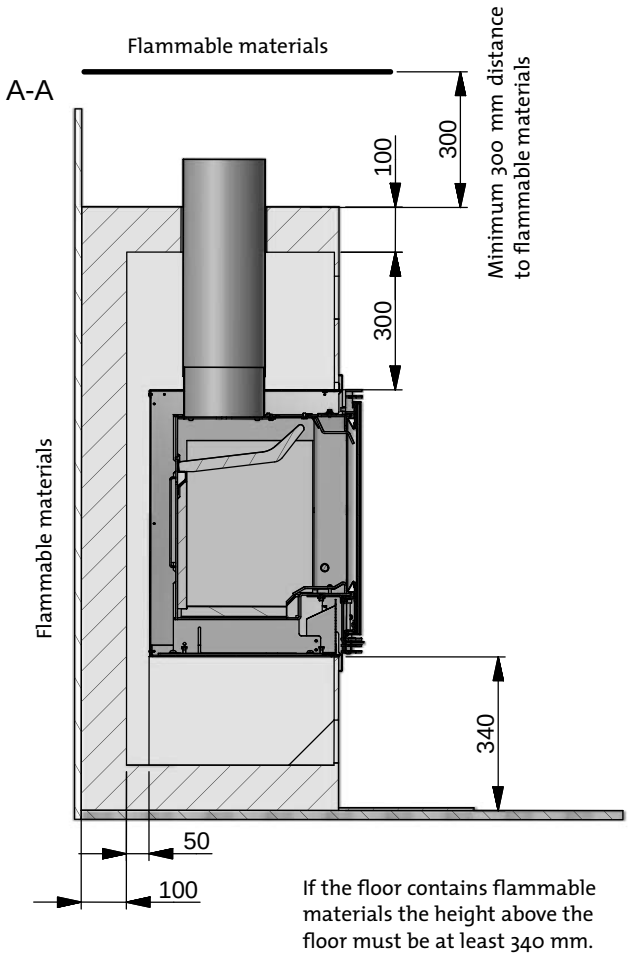
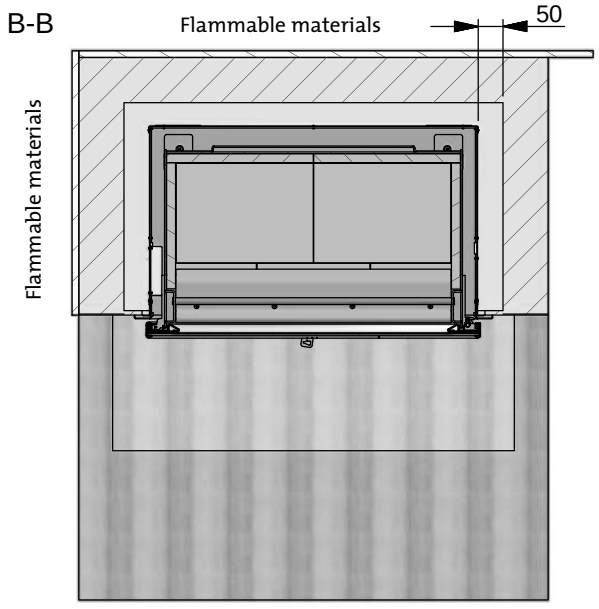


Installation in connection with flammable material





If the floor contains flammable materials the height above the floor must be at least 340 mm.



Positioning near non-flammable materials

When positioning near a non-flammable wall/structure, the distance must be at least 10 mm.

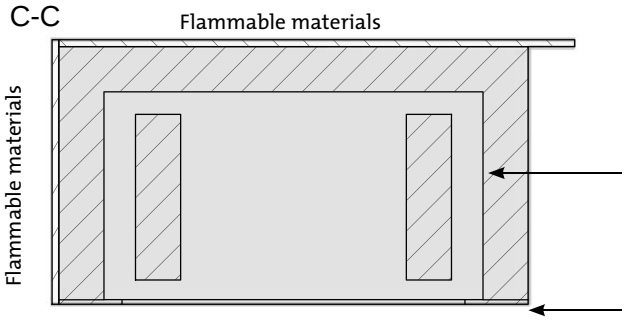
Distance to furniture:

1500 mm

But please check to avoid furniture or other furnishings being dried out due to being too close to the stove.

Load-bearing base

You must ensure that the base the stove is to be installed on is load-bearing with the strength to support the weight of the stove and the chimney, if necessary. If you are unsure about the strength of the base, contact a specialist before carrying out the installation.



100 mm gas concrete / 50 mm Rockwool Firebatt slab with aluminium coating

A front plate of non-flammable material can, for example, be a 10 mm cemented plate

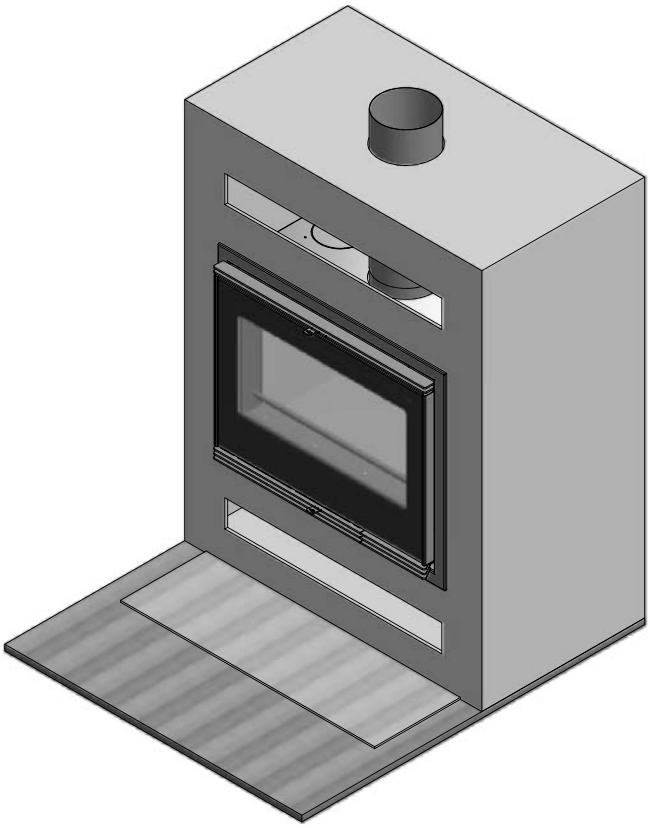
Floor plate

The national and local building regulations must be followed regarding the size of a non-flammable base which is to cover the floor in front of the insert.

Your local Scan dealer can give guidance on the rules concerning the protection of flammable material around the stove.

The floor plate's function is to protect flooring and flammable material against any embers.

A floor plate can be made of steel or glass, however clinker tiles, natural stone or similar materials can also be used.



Existing chimney and pre-fabricated element chimney

If you intend to connect your stove to an existing chimney, it makes sense to contact an authorised Scan dealer, or a local chimney sweep for advice. These experts will also let you know if your flue needs renovating.

When connecting a pre-fabricated element chimney, follow the manufacturer's connection instructions for the relevant chimney type.

Connection between stove and steel chimney

Your Scan dealer, or local chimney sweep, can advise you on choosing a make and type of steel chimney. This ensures that the chimney will match your wood-burning stove. We recommend that the chimney's length from the top of the stove should be no less than 4.5 metres. Some weather or installation conditions might require another length.

Choosing the wrong length or diameter of steel chimney could impair functionality.

Always observe the chimney vendor's instructions precisely.

Requirements for chimney

The chimney must be labelled T400 and G for soot testing.

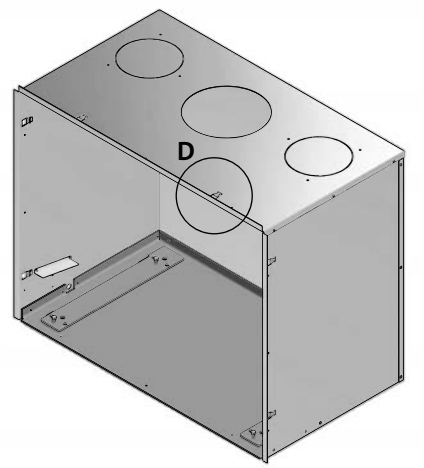
If the chimney is installed as an extension of the stove and has a length of at least 4.5 metres, a 6" chimney can be used.

If the stove is installed with elbow pipes or other bends in the chimney, a 7" chimney can be used.

Fitting the cassette and insert

NB: If you have chosen to fit the insert with convection connection pieces, go to page 14, and then continue the installation as described below.

Fit the clips. They will be used later for securing the trim.



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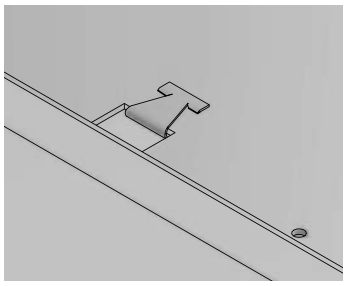
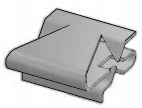
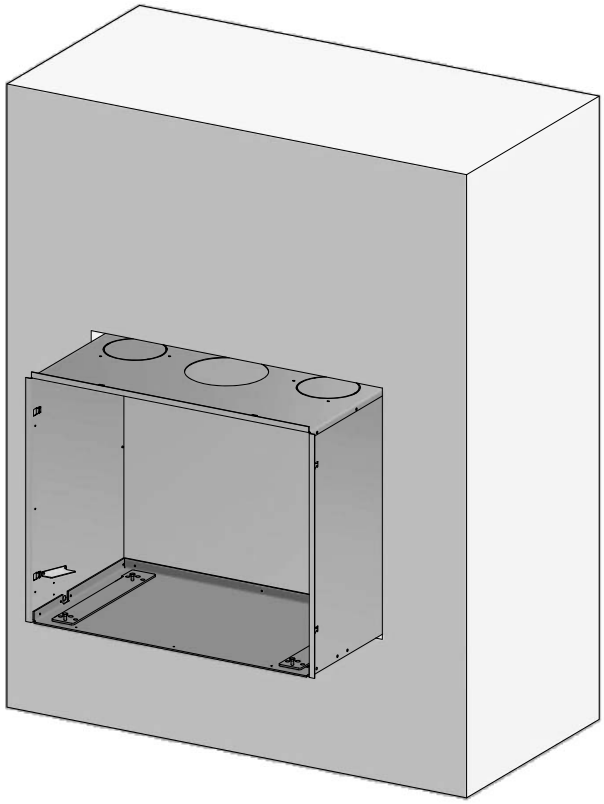


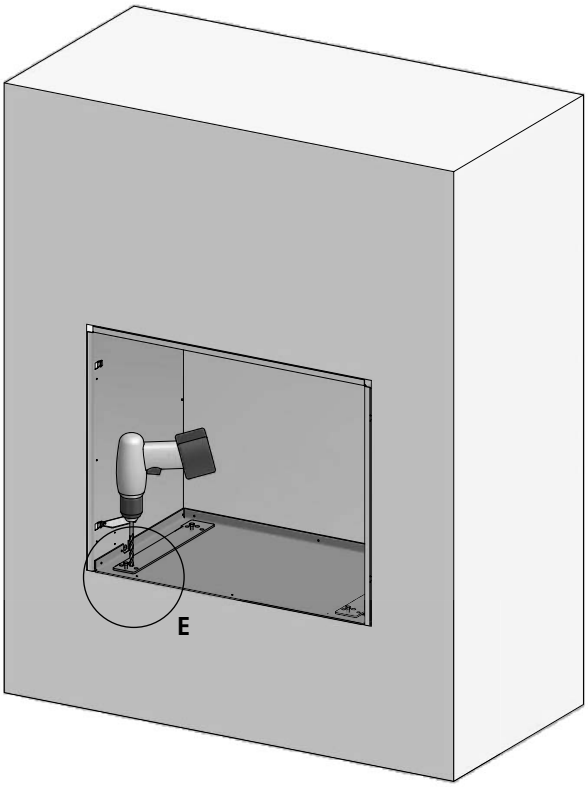


6 x clips

Place the cassette in the hole/surrounding.



To secure the cassette, pre-drill the 4 holes with a 10 mm drill bit.



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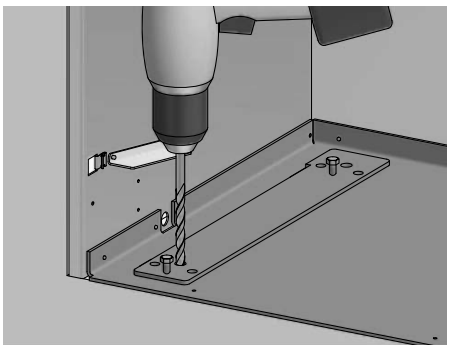
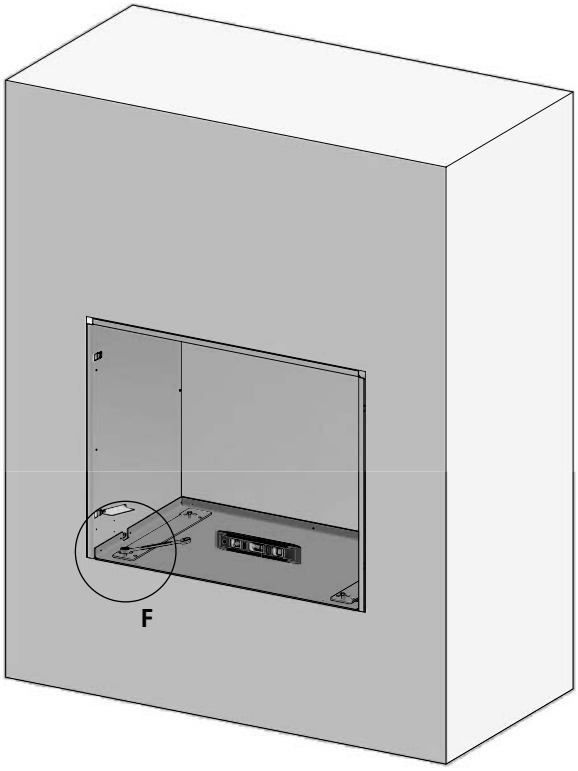


Set the adjustment screws with an open-end spanner so the cassette is level.



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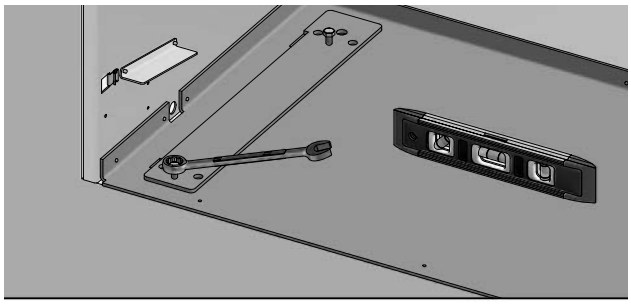
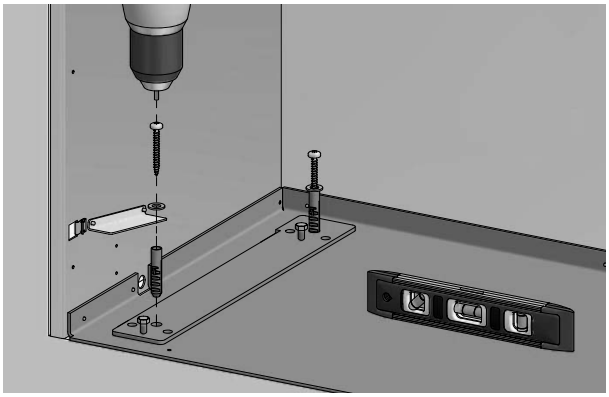


Fit the rawl plugs, screws and washers. Ensure that the cassette is level before tightening. For tightening you can also use the supplied Torx key from the loose parts bag in the insert's combustion chamber.

G



4 x Rawl plugs 10 x 50

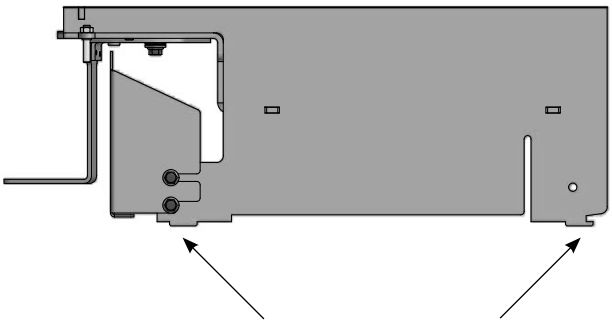
4 x Torx screws 6 x 50

4 x Washers Ø 8 / Ø 16 x 1.5

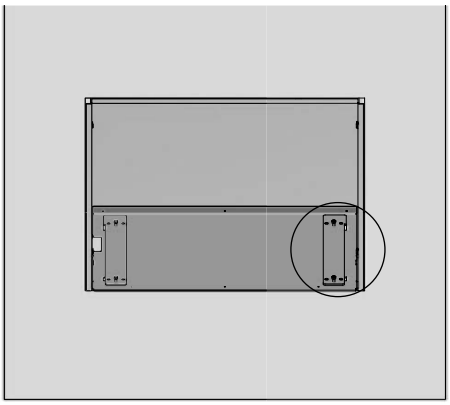
NB: If you have chosen to install your Scan DSA 11 with a fan, go to page 14 for installation of the fan. Then continue with the installation below.

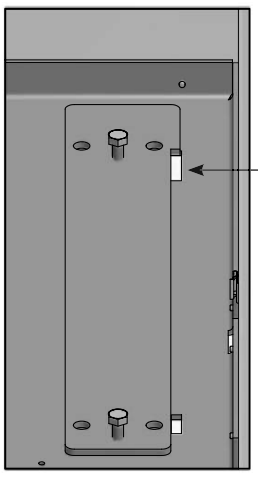
Fit the insert into the cassette.

The stove's pivot pins must fit snugly in the holes in the cassette so that the stove is secured tightly.

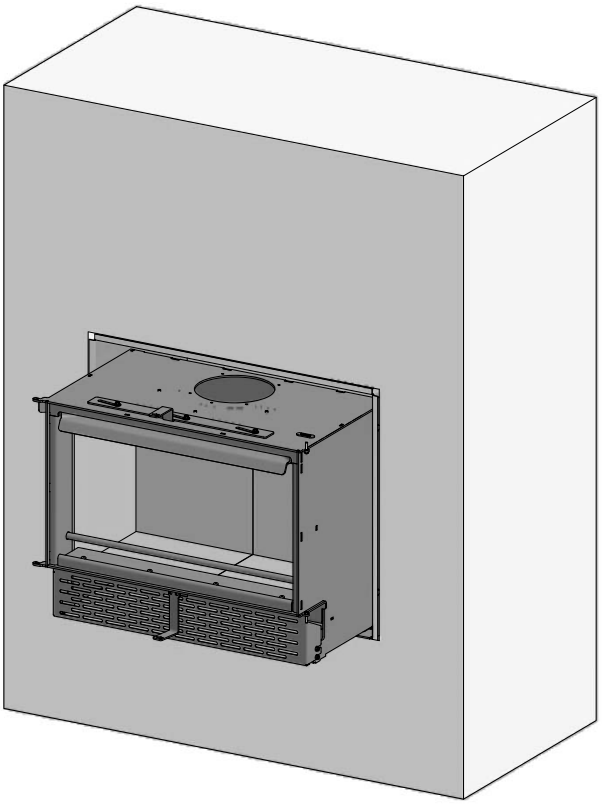


Pivot pins on insert

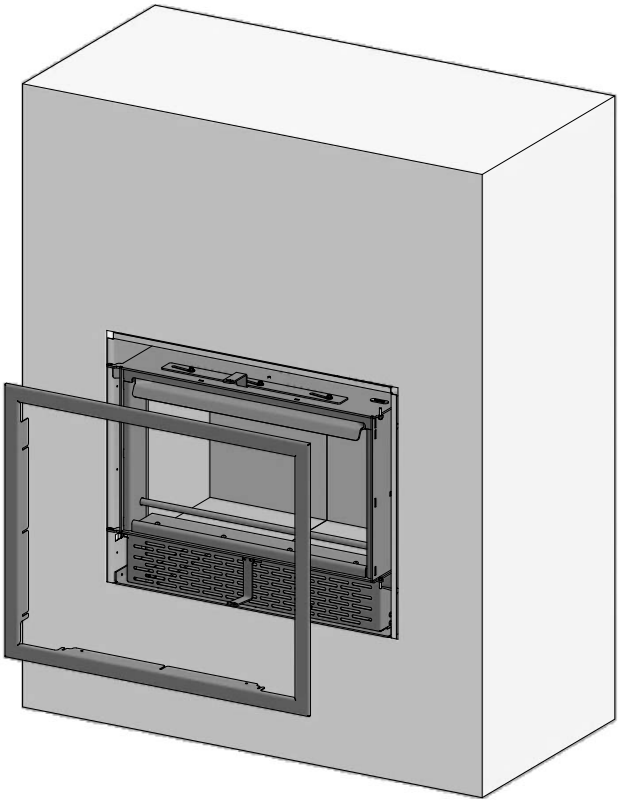




Holes for pivot pins on insert



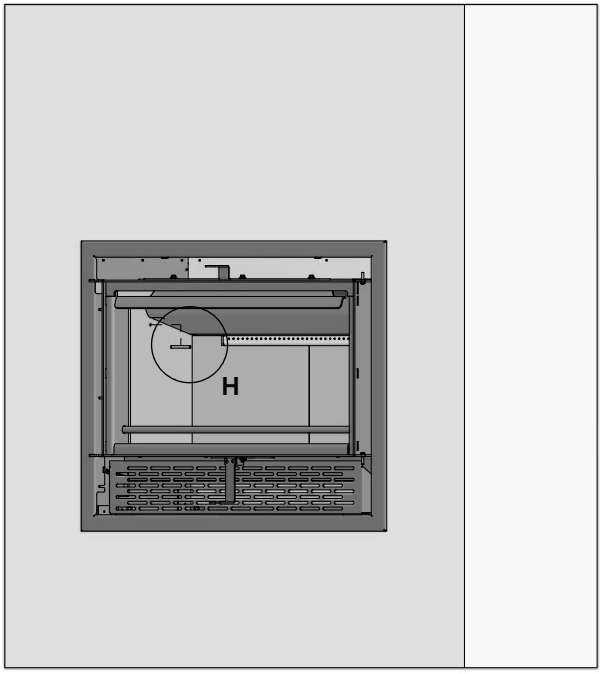
Mount the trim.



Fitting the flue connection piece

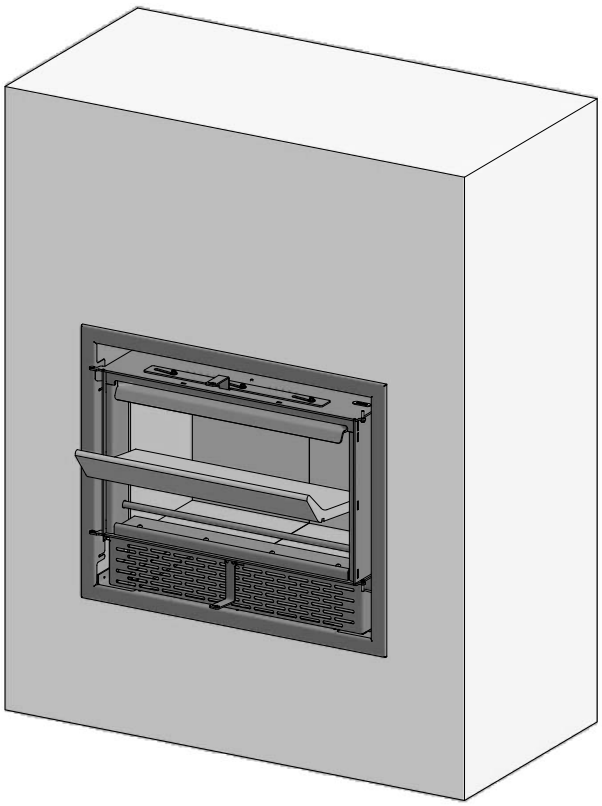
The flue connection piece and the gasket for this is provided loose in the insert's combustion chamber. Before fitting the flue connection piece, the smoke deflector plate must be removed. This must be done as follows:

Lift the smoke deflector plate and remove the pins.

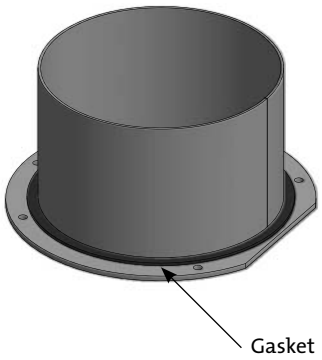


H Pin for smoke deflector plate Ø6 x 50

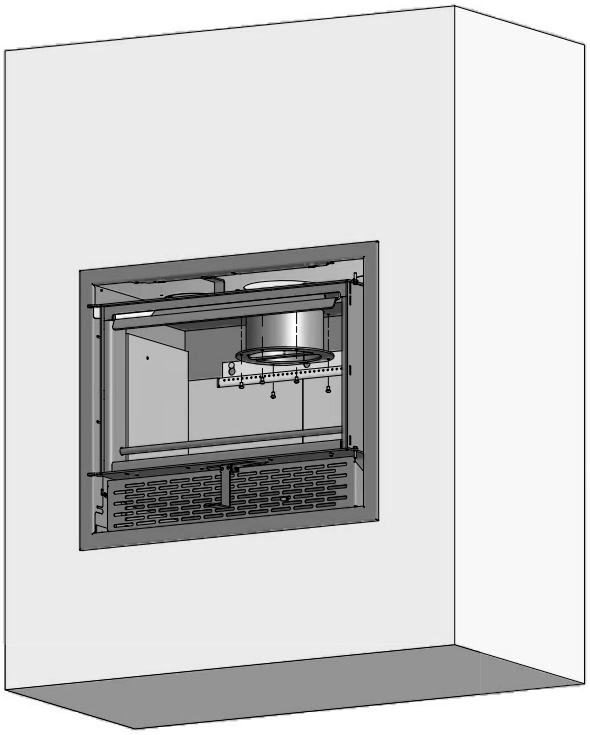
Lower and remove the smoke deflector plate.

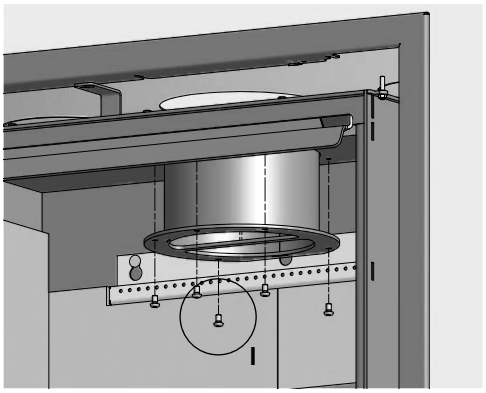


Fit the gasket provided to the flue connection piece.



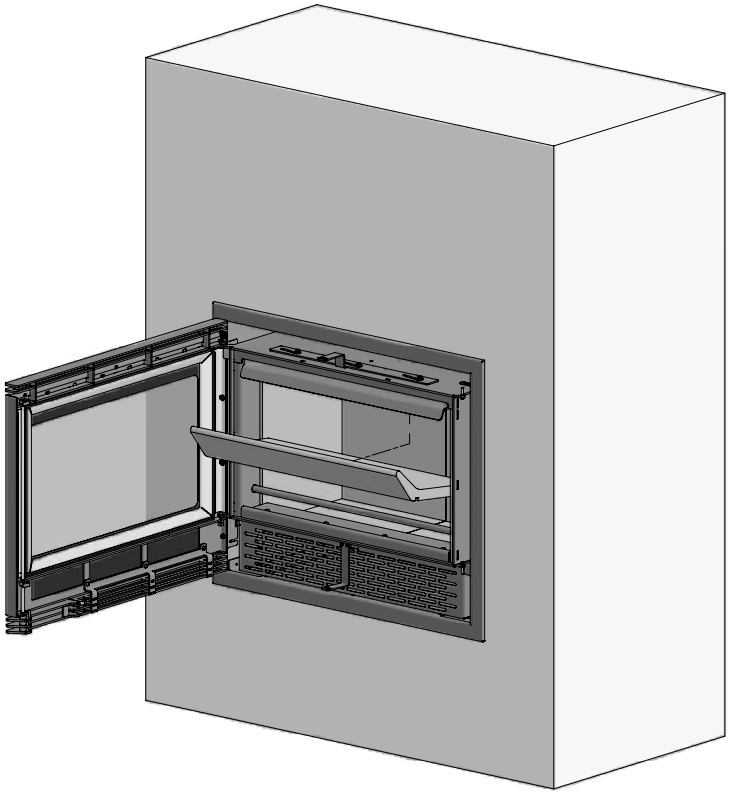
Fit the flue connection piece in the flue outlet with 5 x Allen screws. If necessary, use the supplied Allen key from the service kit for tightening.





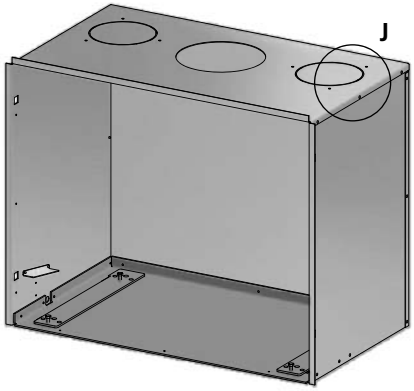
I 5 x Allen screws M6x10

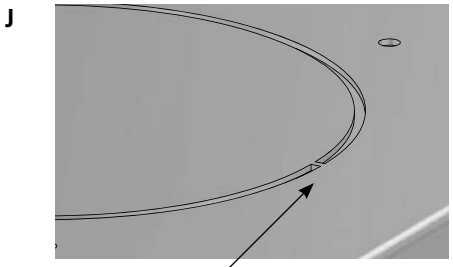
Fit the smoke deflector plate and the door of the insert.



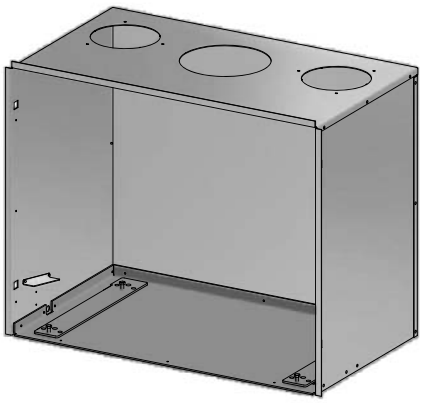
Fitting the convection connection pieces

Cut through the fastening points in the cover plates for the convection connection pieces with pliers and remove the plates.



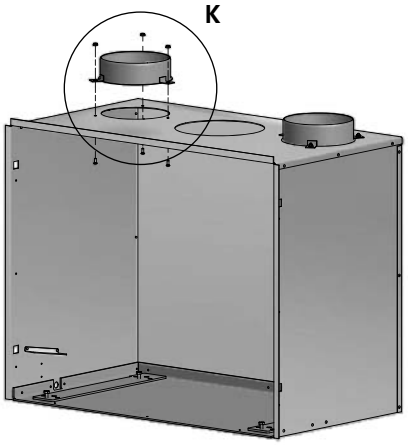


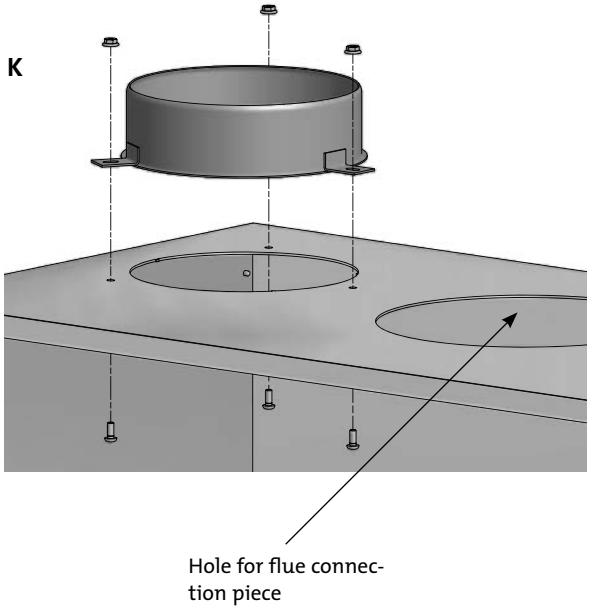
Cassette without cover plates



See page 9 for how to fit and tighten the cassette.

When the cassette has been tightened, fit the convection connection pieces. Fit these and tighten them through the hole for the flue connection piece.





6 x Allen screws M4x10

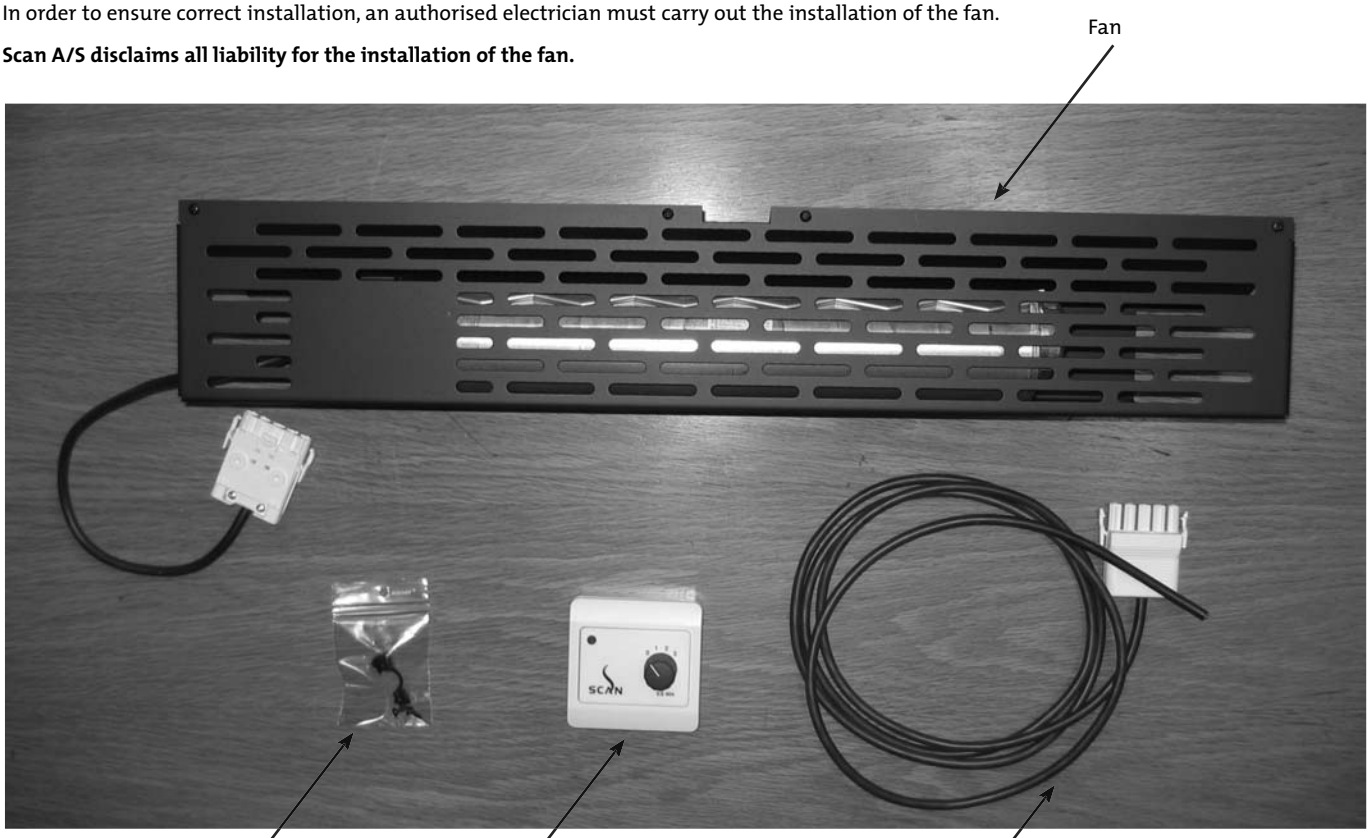
6 x Flange nuts M4

Fitting the fan

The Installation must be planned and executed in accordance with national and local regulations.

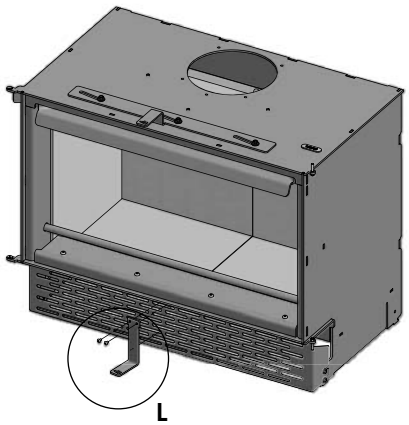
In order to ensure correct installation, an authorised electrician must carry out the installation of the fan.

Scan A/S disclaims all liability for the installation of the fan.



Removing the damper

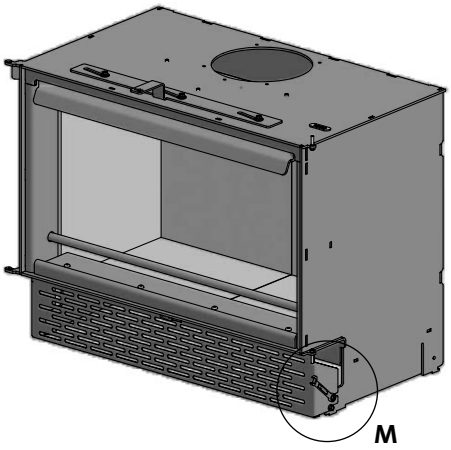
Remove screws and damper. After fitting the fan, refit the damper.



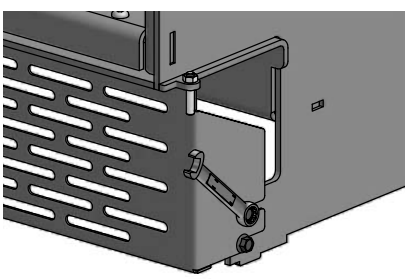
L

Removing the grid

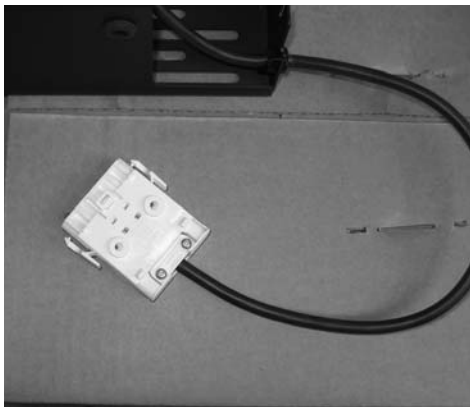
Loosen the screws and remove the grid. The grid is not to be reused.



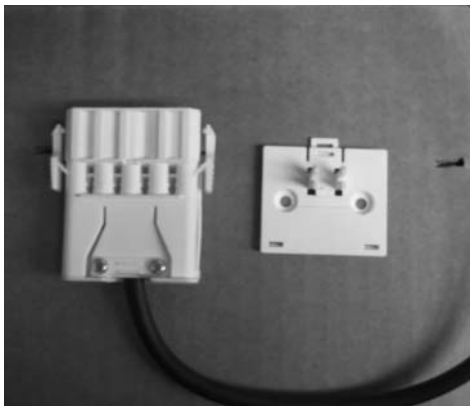
M



Cable with male connector for fan.

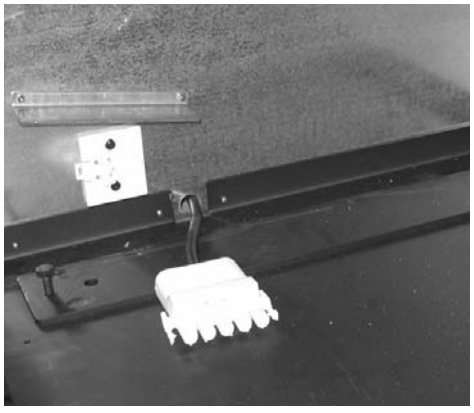


Remove the bracket from the male connector.

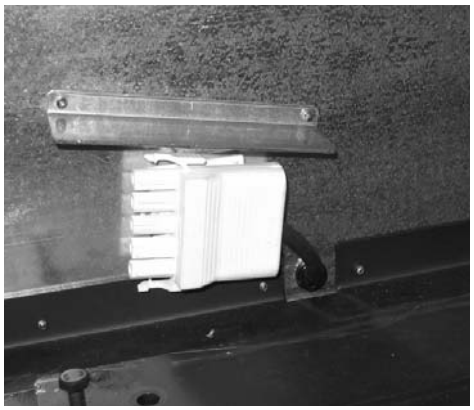


Fit the bracket onto the cassette with the two supplied screws.

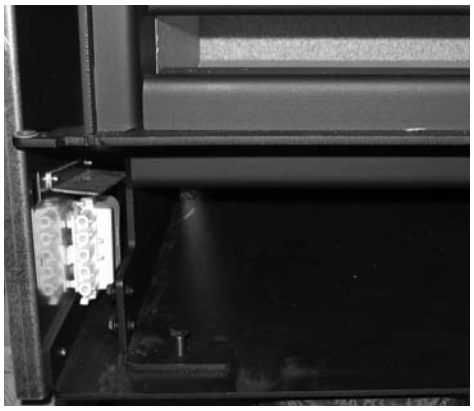
Fit the cable with female connector for ES 904 through the hole in the cassette.



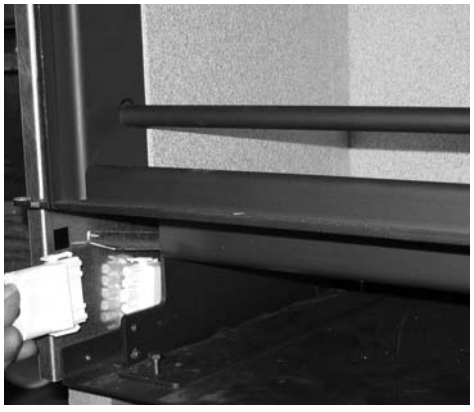
Fit the cable with female connector for ES 904 into the bracket and attach the cable to the cable relief and place it inside the hole in the cassette.



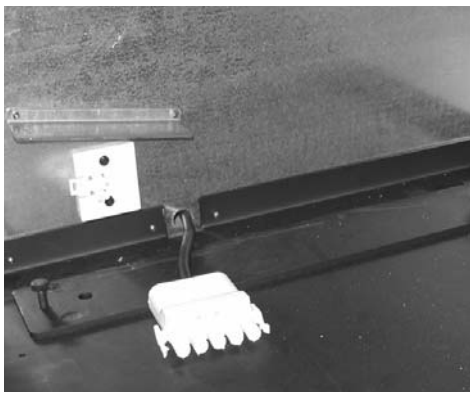
Position the insert in the cassette.



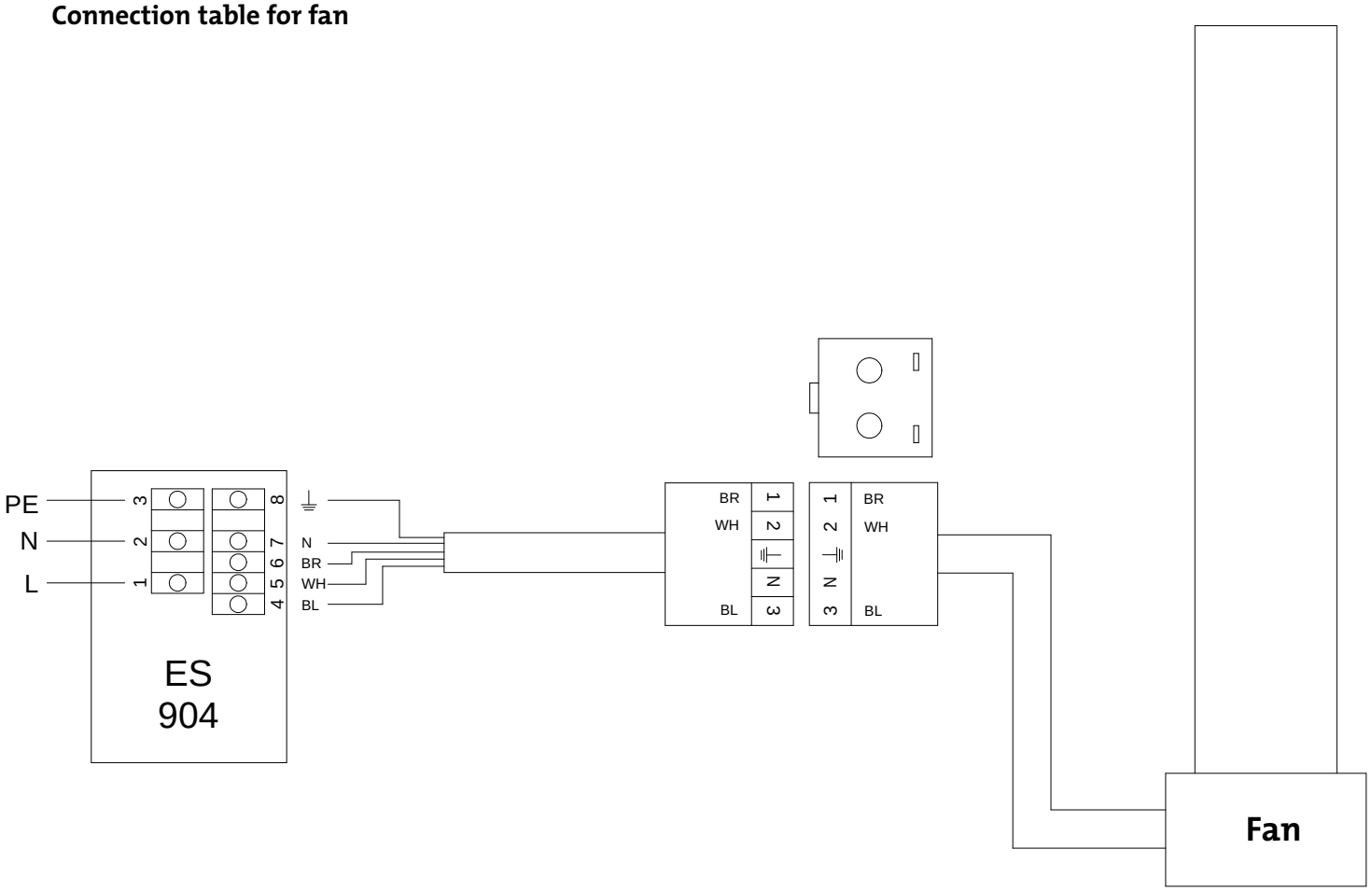
Insert the male connector from the fan in the female connector for ES 904.



Fit the fan into the insert and tighten. Fit the damper.
Place the cable under the two plugs as shown below.



Connection table for fan



Conductor		Cable colour
L	Line (phase)	Brown
N	Neutral	Blue
PE	Protection earth	Yellow/Green

Colour codes for cables	Cable colour
BR	Brown
WH	White
⏚	Yellow/Green
N	Blue
BL	Black

CB Technology (Clean Burning)

The stove is equipped with the clean burning technique. In order to ensure an optimal combustion of released gases under the incineration process, air will pass through a specially developed canal system. The heated air is led into the combustion chamber through the small holes at the rear of the burn chamber.
This air volume is controlled by the combustion rate and thus cannot be regulated.

Smoke deflector plate

The smoke deflector plate is placed in the top part of the combustion chamber. The plate will slow down the smoke and give it a longer holding time in the combustion chamber before it goes up the chimney. The temperature of the flue gases will be reduced because it has more time to release heat from the stove. When sweeping, remove the smoke deflector plate; read how to do this in the "stove maintenance" section. Be aware that the smoke deflector plate is made from a porous ceramic material which can break easily. You must therefore take care when handling it. The smoke deflector plate is a wearing part and as such it does not entail a right to claim for a replacement.

Primary air

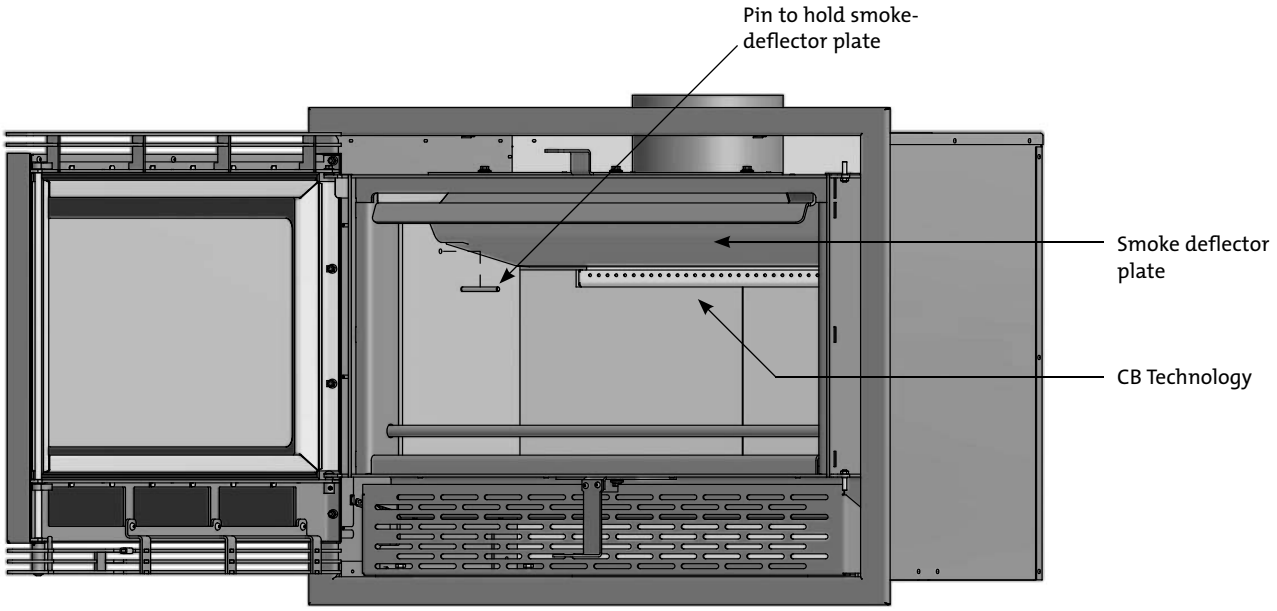
The primary air regulation mechanism is used for lighting the fire, or to boost the burning process when you put wood on. The primary air vent can be 0-50% open if you use hard wood fuel such as oak and beech. You can close the primary air vent if you use soft wood such as birch or pine for fuel.

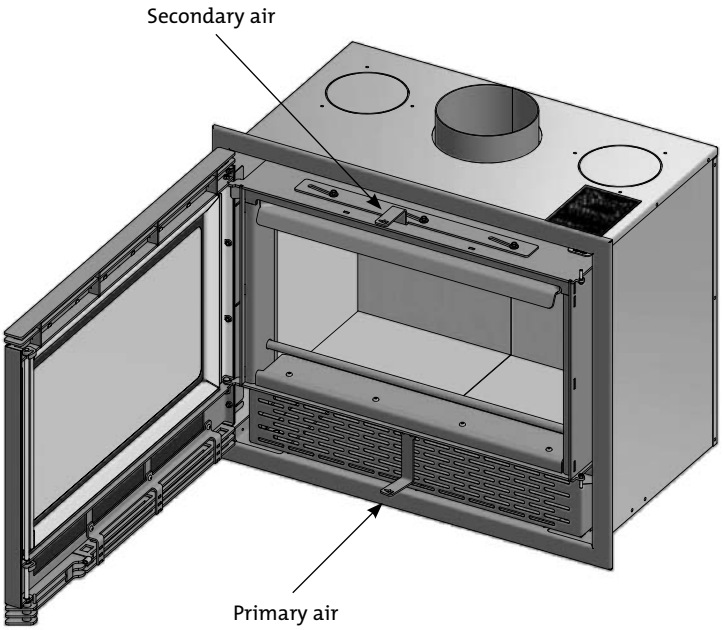
Settings for normal load: 0 - 50%

Secondary air

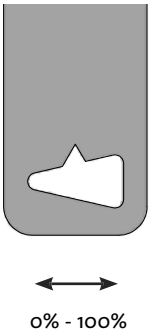
Secondary air is pre-heated and fed indirectly to the fire. At the same time, the secondary airflow cleans the glass pane to avoid soot build-up. If you over-restrict the secondary airflow, soot can build up on the glass pane. The secondary airflow determines the heat output from your wood stove.

Settings for normal load: 40 - 70%





Adjustment of air supply, primary and secondary damper



Environmentally-Friendly Heating

Avoid restricting your wood-burning stove to an extent where no flames are visible during the degasifying period, as this leads to particularly inefficient heating. The gases released by the wood do not burn due to the low temperature in the combustion chamber. Part of the gas condenses in the wood-burning stove and flue system as soot, and this could lead to your chimney catching fire. The smoke that exits the chimney is bad for the environment and has an unpleasant smell.

Lighting

We recommend the use of fire starters, or similar products, which are available from your Scan dealer. Using fire starters helps to light the wood quicker, and keeps the burning process clean.
Never use liquid lighting fuels!

„Top down“ lighting

3 pieces of wood approx. 35 - 45 cm long with a weight of approx. 1 kg per piece.
1 piece of wood approx. 30 - 35 cm long with a weight of about 0.5 kg.
10 - 20 thin sticks of about 20 cm with a total weight of approx. 500 g.
3 fire starters.

Position the large logs in the centre of the combustion chamber 1-2 cm apart as shown. Put half the kindling sticks across the logs in a criss-cross fashion. Place the smallest log on top of the sticks as shown and arrange the last sticks in front of the log. Position the firestarters between the sticks and light.

Set the primary and secondary airflow controls to maximum for about 20 - 30 minutes. When the larger pieces of wood have caught fire properly, you can set the primary and secondary airflow to the desired level.
"Top down" lighting gives a more environmentally friendly start to your fire and helps to keep the glass area as clean as possible.

Continuous firing

It is important to reach as high a temperature as possible in the combustion chamber. This makes the most efficient use of the wood stove and fuel, and ensures a clean burning process. At the same time, this avoids soot build-up on the combustion chamber walls and glass. While the stove is lit, you should not see any smoke, but just air movement that indicates the burning process.
After completing the lighting phase, you should have a good layer of embers in the wood stove; you can then start stoking up the stove. Lay 3 pieces of wood, of about 1 kg weight with a length of about 35 - 45 cm onto the fire.
Note! The wood must catch fire quickly; this is why we recommend setting the primary airflow to full power. Running the stove at too low a temperature and with too little primary air can lead to deflagration of the gases, and thus cause damage to the stove.
When stoking up with wood, always open the glass door carefully to avoid smoke escaping. Stoke up with wood while the fire is still burning nicely.

Using your stove in the spring or autumn

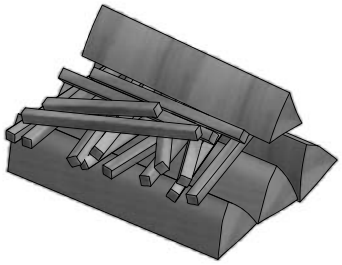
Occasional lighting of the stove using the „top down“ lighting method (see above) is recommended in changeable weather such as in spring/autumn when your heating requirements are not as great.

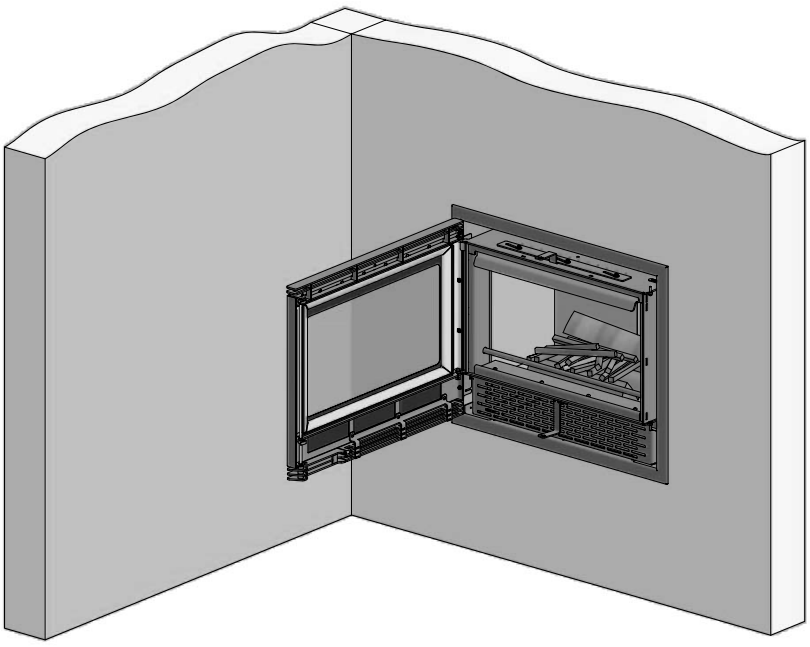
Why you need a chimney

The chimney is the wood-burning stove‘s motor; it‘s performance decides how well your stove will work. The draft in the chimney creates a vacuum in the wood-burning stove. The vacuum draws the smoke out of the stove, and takes in air through the combustion air baffle to fuel the burning process. Combustion air is also used for the airwash system that keeps the window clear of soot.
The draft in the chimney is caused by the difference in temperatures inside and outside the chimney. The higher the temperature difference is, the better the draft in the chimney will be. It is thus important for the chimney to reach operating temperature before you adjust the damper to restrict combustion in the stove (a brickwork chimney will take longer to reach operating temperature than a steel chimney). It is very important to reach operating temperature as quickly as possible on days on which the draft in the chimney is poor due to unfavorable wind and weather conditions. Make sure the fuel ignites as quickly as possible (with visible flames). Chop the wood into particularly small pieces; use an extra fire lighter etc.
After longer periods of disuse, check the chimney flue for blockage.
You can connect several units to the same chimney. But make sure check with your chimney sweep to observe local regulations.
No matter how good your chimney is, it will not perform well if you do not use it correctly. On the other hand a poor chimney, may give you acceptable results if you use it correctly.

Using your stove in various weather conditions

Wind blowing on the chimney can have a great effect on how your stove reacts in various wind conditions; you may need to adjust the airflow to achieve good burning results. Fitting a damper in the flue pipe may also help as it will give you the ability to regulate the draught in changing wind conditions.
Fog can also have a great influence on how well a chimney draws; you may again need to adjust the airflow settings to achieve good burning results.





General Notes

Your wood stove is not designed for continual heating for periods of over 24 hours.

Please note! Parts of the wood-burning stove, especially the outer surfaces, become hot during use. Please exercise due care.

Never empty ashes into a flammable container. Ashes can contain glowing embers long after you finish using your wood stove.

While the stove is not in use you can close the baffle to avoid drafts through the stove.

After longer breaks you should check the smoke outlet paths for blockages before lighting.

Chimney fire

In case of a chimney fire, keep the door and all dampers on the wood-burning stove closed. If necessary, call the fire brigade.

Handling fuels

Selecting Wood/Fuel

You can use any type of wood as firewood, however, harder types, such as beech, ash, are generally better for heating as they burn more evenly and create less ash. Other wood types like maple, birch and spruce are excellent alternatives.

Handling

Firewood is best if you fell the tree, and saw and split the wood, before May 1st. Remember to cut the logs to match the size of your wood-burning stove's combustion chamber. We recommend a diameter of 6-10 cm. The length should be about 6 cm shorter than that of the combustion chamber to leave enough space for air to circulate. Firewood with a greater diameter needs splitting. Split wood dries faster.

Storing

You need to store the sawn and split firewood in a dry place for 1-2 years before burning. Wood dries faster if you stack it in an airy place. Before use, store the firewood for a few days at room temperature. Note that wood absorbs moisture during the autumn and winter seasons.

Moisture

To avoid environmental issues, and for optimum burning, wood has to be perfectly dry to be suitable for use as firewood. The max. residual moisture in the wood should not exceed 21%. A moisture content of 15-18% yields best results. As an easy way of checking if wood is dry, just knock two pieces of wood together. If the wood is moist, the sound will be dull.
If you use damp wood, most of the heat it produces will be used to evaporate the water. The temperature in the wood stove does not rise, and the room is not sufficiently heated. Of course, this is not economical, and it will cause soot build up on the glass pane, in the stove, and in the chimney. Burning moist wood also causes pollution.

Understanding units for measuring wood

Various units of measurement are used for wood. Before you buy wood, it makes sense to familiarise yourself with the terms. There are various brochures, in public libraries for example, that cover this topic.

Materials which cannot be burned

Painted, pressure impregnated, or glued wood, driftwood from the sea. Never burn chipboard, plastics, or chemically treated paper. These materials are dangerous to humans, to the environment, your wood stove, and your chimney. To keep a long story short – make sure you burn only quality firewood.

Firewood fuel value

The fuel value is different for different types of wood. In other words, you need to use more wood of certain types to achieve the same heating performance. This Instruction Manual assumes that you will be using beech, which has a very high fuel value, and is also a wood that is easy to procure. If you use oak or beech wood fuel, note that these wood types have a greater fuel value than, say, birch. Make sure you use less fuel to avoid damage to the wood-burning stove.

Wood types	Kg Dry wood/m^3	Compared to beech
Hornbeam	640	110%
Beech/Oak	580	100%
Ash	570	98%
Maple	540	93%
Birch	510	88%
Pine	480	83%
Fir	390	67%
Poplar	380	65%

Maintaining your wood-burning stove

Apart from regular chimney sweeping, your wood-burning stove does not require any regular maintenance.

Use only original replacement parts for maintenance and repairs of your stove.

Note! Make sure the stove is cold before starting maintenance or repair work.

Coated surfaces

Clean your wood-burning stove by dusting with a dry, lint-free cloth.
If the topcoat is damaged, you can purchase a repair spray from your authorised Scan dealer. As slight differences in colour are possible, spray a larger area to achieve a natural transition for best results. For best results, apply repair spray when the wood-burning stove is hand-hot.

Cleaning the glass

Our wood-burning stoves are designed to prevent serious soot build up on the glass. The best way to achieve this is to make sure you have a sufficient combustion air supply. It is also important to use dry wood, and have a correctly dimensioned chimney.

Even if you follow all of our instructions, a slight film of soot can build up on the glass. You can easily remove this build up by cleaning with a dry cloth and glass cleaner. Your authorised Scan dealer stocks a special glass cleaner for this purpose.

Combustion chamber lining

Slight cracks can appear in the combustion chamber lining due to moisture, or to the heating/cooling process. These cracks have no influence on the heating performance or lifetime of your stove. However, if the lining starts to crumble, you must replace it. The combustion chamber lining is not covered by the warranty.

Seals

All wood-burning stoves have seals made of ceramic material fitted to the stove, the doors, and/or the glass. These seals are subject to wear and tear, and must be replaced when necessary.
Sealing strips are not covered by the right to claim.

Chimney sweeping and cleaning your wood-burning stove

Follow national and local chimney sweeping regulations. We recommend having the wood-burning stove cleaned regularly by the chimney sweep.
Before starting to clean your wood-burning stove, and sweep the flue pipe, we recommend first removing the smoke deflector plates.

Removing the smoke deflector plate

Be very careful when removing the smoke deflector plate from the stove.
Lift the smoke deflector plate, remove the pins and take out the plate.
See page 12.

Smoke escaping

- Damp wood
- Chimney not drawing properly
- Chimney is not properly dimensioned for the stove
- Check if the smoke gas pipe/chimney are blocked
- Is the chimney the right height for its surroundings?
- Vacuum in room
- The door is opened before the embers have burned down sufficiently

Wood burning too quickly

- The air valves are set incorrectly
- The smoke deflector plates is incorrectly mounted or missing
- Inferior firewood (waste wood, pallets etc.)
- Chimney too large

Soot build-up on glass

- Incorrect secondary airflow setting
- Excessive primary air
- Damp wood
- Wood pieces too large on lighting
- Inferior firewood (waste wood, pallets etc.)
- Chimney not drawing sufficiently
- Vacuum in room

Excessive soot build-up in chimney

- Poor burning (more air required)
- Damp wood

The surface of the stove is turning grey

- Overheating (see instructions for heating)

Poor heating performance of stove

- Damp wood
- Not enough wood
- Inferior wood quality with low fuel value
- Smoke deflector plates are not fitted correctly

Odour coming from stove

- The lacquer on the stove hardens when you use the stove for the first time; this can cause an odour. Open a window or a door for ventilation, and make sure the stove is heated up sufficiently to avoid odours later.
- When heating up and cooling down, the stove may make some clicking noises. These are due to the huge temperature differences to which the material is exposed and do not indicate any product defects.

Warranty

All wood-fired Scan products are made of high-quality materials and subject to strict quality controls before leaving the factory. We give a warranty of 5 years on manufacturing errors or defects.

You must quote your stove's product registration number when you contact us or your authorised Scan dealer with a warranty claim.

The warranty covers all parts which in the opinion of Scan A/S require repair or replacement due to manufacturing or construction error

The warranty applies to the original purchaser of the product only, and is not transferable (except on prior sale).

The warranty covers only damage caused by manufacturing or construction errors.

The following parts are not covered by the warranty

- Wear and tear parts, such as the combustion chamber liners, smoke deflector plates, shaker grate, glass, tiles, and seals (except for defects which were present on delivery).
- Defects caused by external chemical and physical influences during transportation, storage and assembly, or at a later time.
- Soot build-up caused by poor chimney draught, damp wood, or improper use.
- Costs of additional heating in connection with a repair.
- Transport costs.
- Costs for setting up, removing the wood stove.

This warranty is void

- In case of incorrect installation (the installer is responsible for observing and complying with legal requirements and local bylaws, along with this Assembly- and Instructionsmanual for the wood-burning stove and accessories).
- In case of improper use, and/or use of prohibited fuels, non-original spares (see this Assembly- and instructions manual).
- If the product registration number of the stove has been removed or damaged.
- In case of repairs that do not comply with our instructions or instructions by an authorised Scan dealer.
- In case of any manipulation of the original state of this Scan product or its accessories.
- This warranty is only valid in the country to which this Scan product was originally supplied.

Always use original replacement parts, or parts recommended by the manufacturer.

Version
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Scan A/S - DK-5492 Vissenbjerg